BC TRANSPORTATION FINANCING AUTHORITY

BCTFA

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2001-2004

performance plan

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TABLE OF CONTENTS

Introduction **6**
BCTFA Mission 6
Organization 6
Working with Other Agencies and Partners 7
Vision and Core Values 7

Protection **8**
Preservation and Replacement Program 8
Performance Measures 10

Planning and Investing Wisely **12**
Priority Corridors Program 13
Major Highway Performance Sustaining Program 15
Minor Capital Improvements Program 16
Lower Mainland Congestion Relief Program 16
Performance Measures 16

Partnerships **23**
Economic Development Partnerships 24
Infrastructure Partnerships 24
Oil and Gas Initiative 2 in Northeast B.C. 24
Federal Provincial Partnership 24
Trans Canada Trail 25
Performance Measures 25

Innovation **27**
Demand Management 27
Maximizing Benefits of Highway Capital Investment 29
New Approach to Generating Revenues 30
Performance Measures 30

The Financial Picture **34**
BCTFA Highway Capital Plan 34
BCTFA Operating Budget 35

Conclusion **36**
Summary of BCTFA Performance Measures 37

BRITISH COLUMBIA

MESSAGE FROM THE MINISTER

I am pleased to present the second Performance Plan for the BC Transportation Financing Authority for the period April 1, 2001 to March 31, 2004, in accordance with the Budget Transparency and Accountability Act.

Helmut Giesbrecht
Minister of Transportation and Highways and Minister Responsible for the BC Transportation Financing Authority.

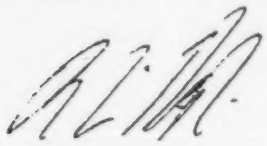
MESSAGE FROM THE PRESIDENT AND CEO

I am pleased to present the second annual Performance Plan of the BC Transportation Financing Authority.

The BCTFA was created by the Build BC Act in 1993 to develop and maintain a comprehensive provincial transportation strategy that serves as a guide to highway capital investments. With a mandate to prioritize provincial highway investments, promote cost-effective project delivery, find innovative ways to finance capital highway construction, and increase the social and economic benefits of its capital investments, objective evaluation and performance measurement are at the core of the BCTFA's work.

Now in its second year of performance reporting, the BCTFA has outlined specific performance measures as required by the Budget Transparency and Accountability Act to determine how well BCTFA programs achieve the ends noted above. As developing and maintaining some of the measures is complex and requires refinement over time, the BCTFA will continue to improve its performance reporting in future years.

On behalf of the Board and staff of the BCTFA, I welcome this opportunity to present the BCTFA's Performance Plan for 2001-2004.



Blair Redlin
President and CEO
BC Transportation Financing Authority

Introduction

BCTFA's Mission

The BC Transportation Financing Authority is a provincial Crown Corporation established in 1993 through the *Build BC Act*. The BCTFA is mandated to develop and maintain a provincial transportation strategy, prioritize investments in the provincial highway system, promote cost-effective project delivery, find innovative ways to finance capital construction of highways, and increase the social and economic benefits of B.C.'s transportation infrastructure.

The *Build BC Act* stipulates that the purpose of the BCTFA is "...to plan, acquire, hold, construct, improve, or cause to be constructed or improved transportation infrastructure throughout British Columbia and to do such things as the Lieutenant Governor in Council may authorize".

The BCTFA owns and directs the development and financing of B.C.'s highway system, finances transportation infrastructure needed for economic development initiatives, encourages the development of alternative modes of transportation across the province and supports a network of community airports that provide emergency evacuation capability as outlined in the Province's transportation strategy, *Going Places*.

In part, the BCTFA pursues these objectives through partnerships with other levels of government and private sector interests. These partnerships often involve innovative financing. In addition, the BCTFA uses its investments in highways to encourage local hiring and provide training and employment opportunities for workers from groups traditionally under-represented in the highway construction industry.

Organization

The BCTFA is governed by a five-member board of directors. The Minister Responsible for the BC Transportation Financing Authority (the Minister of Transportation and Highways) chairs the Board.

Four operating units report to the President and Chief Executive Officer:

- The Program Development and Monitoring Division has the overall responsibility for developing the capital plan and overseeing its timely delivery within approved scope and budget.
- The Project Development and Implementation Division develops and delivers transportation projects that involve partnerships with innovative financing or cost-sharing with external parties.
- The Management Services Division administers grant programs that encourage alternative transportation modes, manages the land portfolio and provides corporate services.
- The Communications Branch provides communications services and advice.

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The BCTFA has a wholly owned subsidiary, Highway Constructors Ltd. (HCL), which employs the labour force for highway capital projects with a provincial investment of $30 million or more (as well as the Skytrain extension project in the Lower Mainland) and provides training and employment for groups traditionally ur der-represented in the transportation construction industry.

Working with Other Agencies and Partners

The BCTFA works closely with the Ministry of Transportation and Highways. BCTFA is the owner of and investor in the provincial highway system, while the Ministry operates and regulates it. MoTH also functions as the delivery agent for the majority of the BCTFA's highway capital investments.

To address B.C.'s transportation challenges, the BCTFA also works in collaboration and partnership with other partners and agencies that share common interests and goals. These include the the private sector, federal government, local governments, other Crown Corporations and TransLink in the Lower Mainland.

Vision and Core Values

The BCTFA has established four objectives that serve as the foundation of all its activities. They are:

1. **Protecting** B.C.'s existing roads, bridges and highways by replacing, rehabilitating and seismically upgrading them;
2. **Investing wisely** through a long-term provincial transportation strategy;
3. **Using innovation** to get the best and most affordable transportation solutions for the money invested; and
4. **Developing partnerships** with other government agencies, communities and the private sector to reduce costs for provincial taxpayers.

Using these four objectives as the foundation for its activities, the BCTFA is able to analyze and direct its investments to ensure they fit into a long-term plan, deliver best value for money and are affordable. To meet these objectives, the BCTFA has developed specific programs and initiatives as well as corresponding performance measures to evaluate progress.

Key Challenges

B.C. needs a transportation system that:

- *Provides safe and convenient access to services, jobs and recreation;*
- *Provides efficient access for industry to goods, resources and markets; and*
- *Supports and reinforces the environmental, land use, economic and social goals of the provincial and local governments.*

These challenges must be met in the face of:

- *Ageing facilities;*
- *Rugged topography and variable climatic conditions;*
- *Population and congestion growth in urban centres;*
- *Land use pressures and environmental constraints that raise the cost of new facilities;*
- *International competition for cargo and passenger traffic;*
- *Demand for new facilities to accommodate economic development; and*
- *Limited funding from tax revenues in light of other demands on these revenues.*

Construction of the Nakusp Bypass in the Kootenays is one of BCTFA's investments to improve mobility in the North and the Interior

Protection

The provincial highway system consists of some 23,200 km of paved roads, 18,200 km of gravel roads, and 2,700 bridge structures. These highway assets have a net book value of $6.1 billion. The road system is comprised of three types of roadways:

- primary highways;
- secondary highways; and
- local and or regional roads in unincorporated areas.

Every component of B.C.'s highway and road system has a fixed life span. BCTFA's long-term capital planning is based on ongoing needs analyses, which indicate that most of our primary and secondary highways are ageing, but remain in good condition. This good condition must be maintained at a least life cycle cost to extend the useful life of these assets and ensure they function as intended and that they remain safe. The component of the BCTFA Highway Capital Plan aimed specifically at this objective is the Preservation and Replacement Program. The Authority also administers two grant programs that help protect the parts of the provincial transportation network that do not belong to the Province.

Preservation and Replacement Program

The BCTFA's long-term capital plan has targetted a level of $135 million investment annually to maintain the highway system's overall good condition. In excess of the necessary $135 million has been invested in the Preservation and Replacement Program each year since 1998/1999; $140.2 million will be invested through the program in 2001/02, and $135 million has been allocated for subsequent years.

It is important to maintain and rehabilitate the assets at a strategic point in their life cycle to minimize costs over the life of the asset. The earlier repairs are made, the lower the cost and the more effectively taxpayer dollars are invested. Table 1 shows the cost of rehabilitating roads at different stages of deterioration.

Table 1
Pavement Condition versus Life Cycle Costs

Condition	Age	Pavement Life Cycle Investments
Good		No rehabilitation with proper maintenance
Fair	12	Rehabilitation options range from $12,000 to $65,000 per km
Poor	15	Rehabilitation options range from $80,000 to $120,000 per km
Very Poor	20	Reconstruction at $400,000 per km

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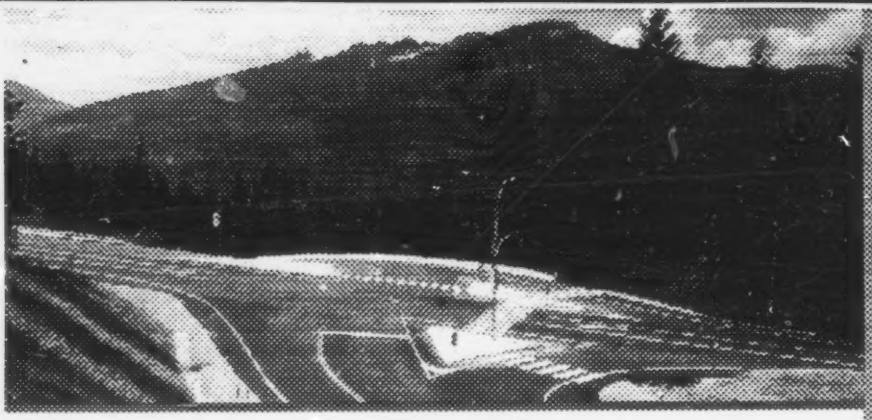


The Preservation and Rehabilitation Program is comprised of three elements:

- road and bridge resurfacing;
- bridge rehabilitation and replacement; and
- seismic retrofitting.

Road and Bridge Resurfacing

By replacing or hard-surfacing roads at advantageous times, the life cycle costs of highways can be minimized. 2,310 lane kilometres were resurfaced in 2000/01, and 2,000 lane kilometres per year will be resurfaced over the next three years.

Bridge Rehabilitation and Replacement

Of the province's 2,700 bridge structures, most are in good condition, with approximately 600 in need of major repair or replacement. Since the beginning of fiscal 1998/99, the BCTFA has replaced or rehabilitated 102 bridges, addressing the most critical needs at a faster rate than deterioration takes place, thereby reducing the number of bridge structures that require major investment.

Seismic Retrofitting

This program upgrades bridges in the province. The goal is to address the ability to respond in the event of an earthquake by retrofitting Lifeline Bridges and Disaster Response Routes which are critical to responding to emergency situations in the event of an earthquake.

Primary Highways in B.C.

Hwy. 1: Victoria to Nanaimo, Lower Mainland to Alberta Border

Hwy. 2: Dawson Creek to Alberta Border

Hwy. 3: Hope to Alberta Border

Hwy. 5: Hope to Tete Jaune Cache

Hwy. 7: Port Coquitlam to Hope

Hwy. 11: US Border to Mission

Hwy. 16: Prince Rupert to Alberta Border

Hwy. 17: Victoria to Swartz Bay, Tsawwassen to Hwy. 99

Hwy. 19: Nanaimo to Port Hardy

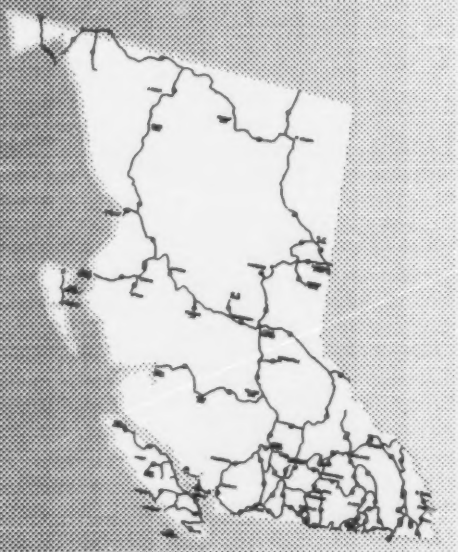
Hwy. 37: Kitwanga to Yukon Border

Hwy. 43: Dawson Creek to Alberta Border

Hwy. 97: US-Border to Salmon Arm, Cache Creek to Yukon Border

Hwy. 97C: Peachland to Merritt

Hwy. 99: US Border to Hwy. 1, Horseshoe Bay to Hwy. 97



PERFORMANCE MEASURES

Performance of investments through the Preservation and Replacement Program is measured by the percentage of B.C.'s bridges and pavement quality rated as good or excellent condition on an annual basis.

Table 2
Annual Percentages of Facilities in Good or Excellent Condition

Measure	1999/00	2000/01	2001/02	2002/03	2003/04
Bridge Condition (% in good or excellent condition)	77%	78%	78%	78%	78%
Primary Road Pavement Condition (% in good or excellent condition)	75%	75%	75%	75%	75%
Secondary Road Pavement Condition (% in good or excellent condition)	65%	65%	65%	65%	65%

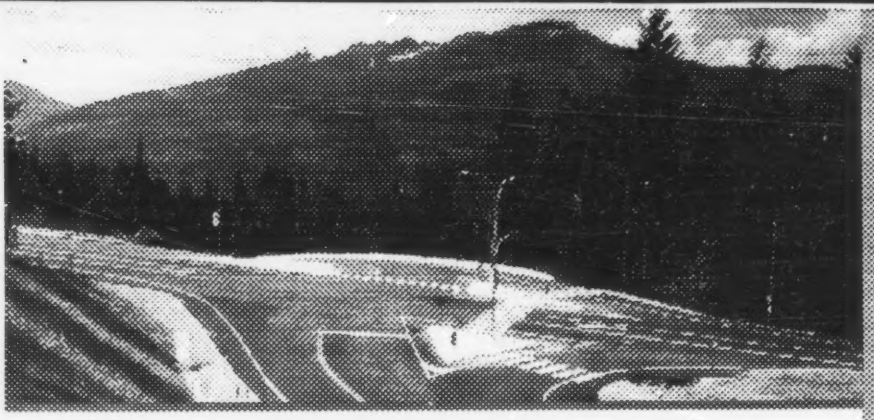
The performance of the BCTFA's seismic program is measured by an estimate of costs that will be avoided through seismic upgrading. The benefits are estimated to yield an average of $600 million of avoided costs (lives lost, destruction, damage to infrastructure through floods and fire, etc.). Unlike other programs where efficacy can be measured against predetermined goals, the effectiveness of the program will ultimately only be known at the time of the event, not upon project completion. Therefore, a proxy performance measure is percentage of projects completed as a proportion of the respective phases.

Table 3
Past and Targetted Cumulative Percentage of Phase 1 Completed Investments

	Past Expenditures ($35.5 Million)	2001/02 (Projected) ($3 Million)	2002/03 (Projected) ($3 Million)	2003/04 (Projected) ($3 Million)
Phase 1 (% of $75 Million)	47.33%	51.33%	55.33%	59.33%
Estimated Benefit (Based on % of $600 Million)	$284 Million	$308 Million	$332 Million	$356 Million

Grant Programs Protecting Non-provincial Transportation Network Assets

In addition to making capital investments in its own transportation assets, the BCTFA provides loans, guarantees, and other financial instruments, such as grants to public and private sector organizations to



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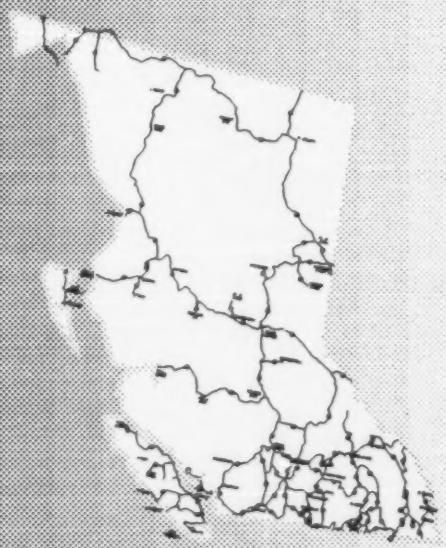

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Grant Programs Protecting Non-provincial Transportation Network Assets

In addition to making capital investments in its own transportation assets, the BCTFA provides loans, guarantees, and other financial instruments, such as grants to public and private sector organizations to

support their transportation infrastructure investments. As these programs involve non-provincial assets, investment targets involve ensuring that funding falls within notional budgets for the programs and is applied only to those projects that meet investment criteria.

Air Transport Assistance Program

The Air Transport Assistance Program (ATAP) was established in 1978 to provide financial assistance to community airports for capital works. As part of its mandate to "plan, acquire, construct, hold, improve or cause to be constructed or improved transportation infrastructure", the BCTFA assumed responsibility for the program from the Ministry of Transportation and Highways in 1994. ATAP is an application-driven, conditional grant program that helps maintain B.C.'s network of air transport facilities so that remote and rural communities have a basic level of air access and provide emergency services. The program does not fund the operation or maintenance of airports. For certain projects, ATAP requires that local governments pay a share of costs.

In 2001/02, the BCTFA approved grants of $1.49 million to fund 17 projects at 15 community airports. In 2000/01, $0.95 million was provided for 13 projects at 12 community airports.

Newly Incorporated Territories Program

The BCTFA has responsibility for meeting the Province's outstanding capital obligations arising from the Incorporation Assistance Program, which was eliminated in 1996. Under this program, the Province provided grants to newly incorporated territories and restructured municipalities for roads that had been scheduled for upgrading by the Province shortly after the date of incorporation. Although no new grants have been awarded, the BCTFA has been charged with honouring existing commitments to 22 municipalities. Most of these commitments have been completed over the past five years.

The BCTFA's objective for meeting this standing obligation is to accomplish it as soon as possible, thereby freeing up funds for other programs. The BCTFA is investing $2.7 million in 15 NITP projects in seven communities in 2001/02 through this program. The remaining commitments to seven communities totalling $3.9 million will be funded over the next six years, when all commitments are anticipated to have been met.

Seismic Retrofitting Program

British Columbia's earthquake-prone regions – the Lower Mainland, the northwest, and Vancouver Island – have 1,132 highway bridges. Of these, 470 have been identified as needing seismic upgrading because they are the most vulnerable to earthquake damage and are on designated emergency response routes. The BCTFA's long-term highway capital plan indicates that an investment of $210 million is required in two phases of work. The first phase of investment of $75 million is underway to address the seismic condition of bridges on critical routes to ensure that B.C. can respond to a major seismic event. The second phase of investment of $135 million will commence when the first phase is complete or nearing completion.

Monte Creek Interchange project, one of a series of improvements on the Trans Canada Highway from Cache Creek to the Rockies

Planning and Investing Wisely

Wise investment and getting the most benefit for taxpayer dollars involves finding creative, affordable transportation solutions that:

- move goods and people more efficiently;
- provide a highway system that keeps B.C.'s businesses competitive;
- relieve congestion and help protect air quality; and
- support development of liveable communities.

B.C. has the most demanding geography in all of Canada for building transportation infrastructure, as well as some of the fastest growing regions. The Lower Mainland, Central Okanagan and southern Vancouver Island have the highest traffic volumes on a relatively small portion of B.C.'s entire highway infrastructure. The heavy demand, coupled with increasing populations and economic growth in these areas combine to make these areas high priorities for highway infrastructure investments. At the same time, maintaining the performance of highway corridors in other areas of the province also requires significant investment, as does a range of smaller capital projects that provide enhanced benefit for their cost, but must compete with larger primary highway projects.

Planning BCTFA's capital investments is in keeping with the objectives and priorities set out in *Going Places*, the Province's strategic transportation plan and is supported through the Authority's Strategic Planning Fund. The fund covers:

- systems planning for growth management areas;
- planning for major corridors to define functional requirements;
- program development for multi-element capital initiatives to define problems;
- determining options, confirming feasibility and undertaking multiple account evaluation; and
- development of partnership opportunities.

Corridor planning activities are required on major highway corridors to define required improvements, implementation strategies and investment levels to ensure that short-term activities are generally consistent with longer-term needs. In directing corridor management activities that are normally carried out by the Ministry of Transportation and Highways, the BCTFA also ensures that transportation objectives are co-ordinated with regional growth management strategies and local land use plans.

In 2001/02 the BCTFA has allocated $1.5 million to continue developing investment strategies that are underway and begin corridor planning for:

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- systems planning for growth management areas;
- planning for major corridors to define functional requirements;
- program development for multi-element capital initiatives to define problems;
- determining options, confirming feasibility and undertaking multiple account evaluation; and
- development of partnership opportunities.

Corridor planning activities are required on major highway corridors to define required improvements, implementation strategies and investment levels to ensure that short-term activities are generally consistent with longer-term needs. In directing corridor management activities that are normally carried out by the Ministry of Transportation and Highways, the BCTFA also ensures that transportation objectives are co-ordinated with regional growth management strategies and local land use plans.

In 2001/02 the BCTFA has allocated $1.5 million to continue developing investment strategies that are underway and begin corridor planning for:

- Highway 97 south;
- Highway 5;
- Highway 3/95;
- A side road system analysis;
- Community access management plans; and
- Partnership development.

The BCTFA has established separate investment programs within its long-term capital plan in order to prioritize worthy investments in the context of like projects, while ensuring that projects support long-term transportation solutions.

- Priority Corridors Program
- Major Highway Performance Sustaining Program
- Minor Capital Improvements Program
- Lower Mainland Congestion Relief Program

Priority Corridors Program

The BCTFA's Priority Corridors Program was established to develop investment strategies that would lead to improved service along B.C.'s primary highway corridors. The Authority's investment strategies are based on the best, most-affordable transportation solutions as determined by corridor management plans for routes that have deficiencies and/or are facing pressures from traffic growth. The program is currently focussed on five priorities:

Highway 1 from Cache Creek to the Rockies

There is a clear need for improvements along the 525-kilometre section of the Trans Canada Highway from Cache Creek to the Rockies, which runs in large part through rugged, mountainous terrain. Addressing the difficult topography and engineering required is very expensive and will take time.

A corridor management study for the route identified short- and long-term options for improving safety and congestion prioritized under a multi-year program that funds the most needed improvements on an annual basis. Since 1995 (including 2001/02), the BCTFA invested nearly $134 million in the corridor. Each year's funding includes design and

Improving the Trans Canada Highway from Cache Creek to the Rockies

The Cache Creek to the Rockies section of the Trans Canada Highway is a route with international, national, provincial and local significance. Primarily a two-lane highway, it has four lanes in and around urban area and has passing lanes in other sections.

Increasing traffic volumes, particularly in the summer months, have created congestion problems, travel delays and a higher accident rate, particularly in the two-lane sections. Some stretches in the mountainous areas have deteriorated and require significant improvements if they are to remain reliable.

To address these problems, BCTFA Board has approved an investment strategy that will:

- *Improve highway lengths around Salmon Arm, Kicking Horse Pass and Three Valley Gap;*
- *Make functional improvements in Kamloops, Sorrento, Chase, Sicamous, Revelstoke and Golden; and*
- *Add passing lanes, realignments and safety enhancements to ease traffic volumes and improve safety.*

While this long-term strategy has been approved, projects are proceeding on a case-by-case basis, put forward for Treasury Board approval annually. Project approvals are based on individual business cases.

In 2001/02, the BCTFA will invest almost $28 million to upgrade the highway. Including this year's funding $134 million has been invested in the corridor since 1995.

Installation of fish passage culvert as part of Nisga'a Highway improvements

engineering money to prepare an inventory of shelf ready projects to ensure that improvements can move ahead in a timely manner when funding comes available.

Federal participation in funding improvements to the corridor, which forms part of the National Highway System, would speed up the improvement program. However the BCTFA is proceeding with its current investment strategy, while federal decisions are being made.

Highway 37 north of Meziadin Junction

A crucial resource and tourism corridor for the northwest region of B.C., this route requires long-term upgrading in order to provide reliable service and to ensure safe access.

Fiscal year 2001/02 is the third year of a four-year investment plan that will see a total of $14.49 million invested in reconstruction and sealcoating of 44 kilometres of the highway (from Deltaic Creek to Bell-Irving #2 Bridge and from Rescue Creek to Kinaskan Lake).

Highway 97 from the US Border to Highway 1

This route is a main north-south highway, serving B.C.'s interior and linking it to the United States. It is thus of international and national significance as well as serving as a major provincial transportation and tourism corridor.

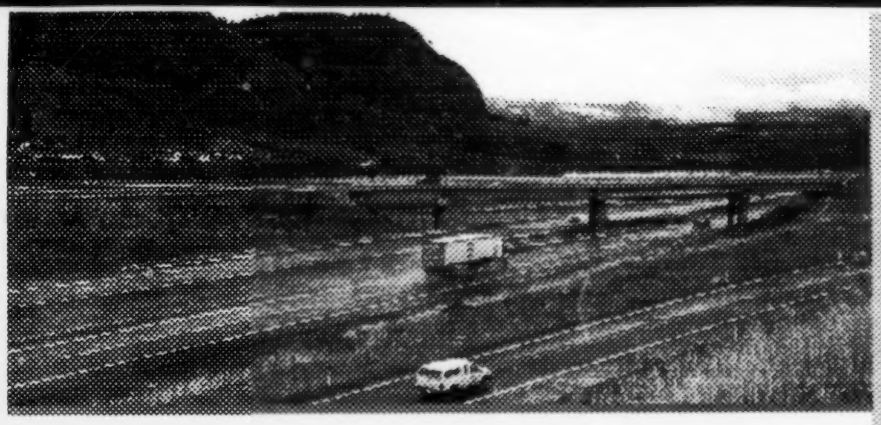
A corridor management plan has been developed for the section of the route in the Central Okanagan Regional District to support the Regional District's growth management strategy. Funding and governance discussions are underway with local governments to determine options for alternative funding arrangements.

The 2001/02 strategic planning fund will provide funding to commence work on a corridor management study for the route from the Central Okanagan south to the US border, that will ultimately lead to an investment strategy to improve efficiency and safety. Detailed design is underway for a 5-lane replacement Okanagan Lake bridge and for passing lanes near Okanagan Lake Park (Summerland to Peachland).

Nisga'a Highway

Conclusion of the treaty process in the Nass Valley will lead to economic growth and development requiring safe reliable highway access. The region's main road access, the Nisga'a Highway, experiences flooding and has poor surface conditions and deficient alignment impeding its reliability.

To address this deficiency, the BCTFA is investing $41 million over seven years that will see significant improvements to the highway. Begun in 1998, improvements will lead to provision of an all-weather two-lane road (general 70-km/h standard) to serve Nass Valley residents and resource industries in the area.



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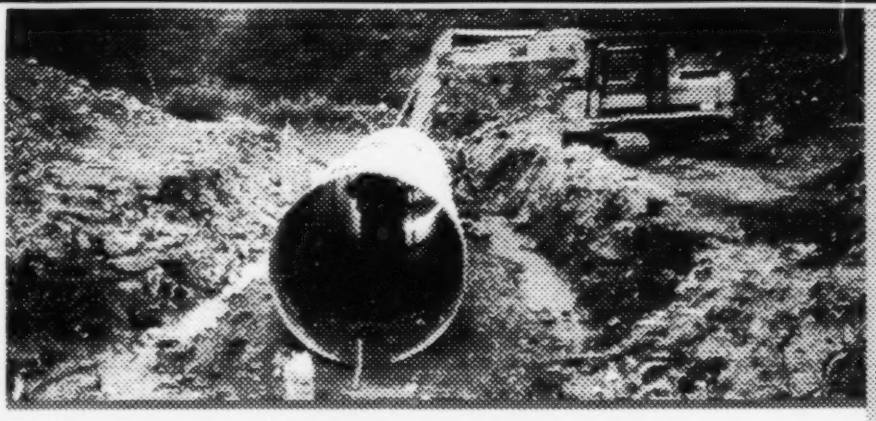


The Village of Kincolith, only accessible by air or sea in the past, will become accessible by a new road which will be connected to the Nisga'a Highway at Greenville. The $34-million Greenville to Kincolith Road Project is being completed under a partnership between the federal government, the BCTFA and the Nisga'a Tribal Council.

Vancouver Island Highway

The main north-south corridor serving Vancouver Island is comprised of the Trans Canada Highway south of Nanaimo and Highway 19 from Nanaimo to Campbell River. Maintaining the performance of the corridor was problematic due to rapid population and economic growth as well as development along the corridor. Therefore, a $1.2-billion project (1993 dollars) was developed to construct new sections of highway and upgrade others in order to meet current and future traffic demands and support long term economic development for the Vancouver Island region.

Partially underway prior to the inception of the BCTFA's current Priority Corridors Program, work on the project began in 1993. BCTFA has continued with an investment program that has seen the project work completed each year on time and on budget. Investment of $34 million in this project during fiscal year 2001/02 will see completion of the majority of major construction for the project.

Major Highway Performance Sustaining Program

Through the Major Highway Performance Sustaining Program, the BCTFA invests funds to maintain optimal service levels on major highways throughout the province that are not part of the Priority Corridors Program. Initiatives under this program include constructing:

- Passing lanes and truck climbing lanes;
- Intersection improvements;
- Road realignments to improve safety; and
- Capacity improvements through towns and cities.

Examples of projects undertaken under this program are improvements to South Peace Hill on Highway 97, south of Dawson Creek, improving the Culliton Creek to Cheakamus section of Highway 99 and the Harris Road to Clayburn Road section of Highway 11 in Abbotsford.

Vancouver Island Highway Project (VIHP)

The Vancouver Island Highway Project (VIHP) on the eastern side of the island represents the majority of planned highway construction in this region. As an investment in Vancouver Island's future, this major project upgrades and replaces sections of Highways 1 and 19 between Victoria and Campbell River to relieve congestion, improve safety for highway traffic and act as a catalyst for investment. The project includes a bypass of downtown Nanaimo, an inland route from Parksville to Campbell River and a new western approach to Victoria. Each of these major components relieves congestion.

The VIHP has provided great benefits to local residents and communities because about 90% of workers have been locally trained and hired; creating an invaluable pool of skilled, local trades people. While under construction, the highway also increased the demand for the products and services of local suppliers and businesses.

A project agreement with Highway Constructors Ltd. ensured local jobs, equity opportunity and no strikes or lockouts for the life of the construction, ensuring timely completion and smooth labour relations.

Now nearing completion, only minor sections of the VIHP remain scheduled for work between 2001 and 2004. The entire project represents a $1.2-billion investment (1993 dollars) in highway infrastructure. There are no risks associated with the remaining investment in this project.

Work taking place on a major rehabilitation of the Lions Gate Bridge in the Lower Mainland

Minor Capital Improvements Program

The BCTFA's Minor Capital Improvement Program allocates $10 million per year for small, cost-effective projects throughout the province. The focus of MCIP is on the North, Interior and Kootenays. It serves to reduce local pressures for more extensive investment where either funding is not available or value for money cannot be demonstrated. Emphasis is on the application of ambient condition design specifications that are consistent with the character of the remainder of the corridor on which improvements occur.

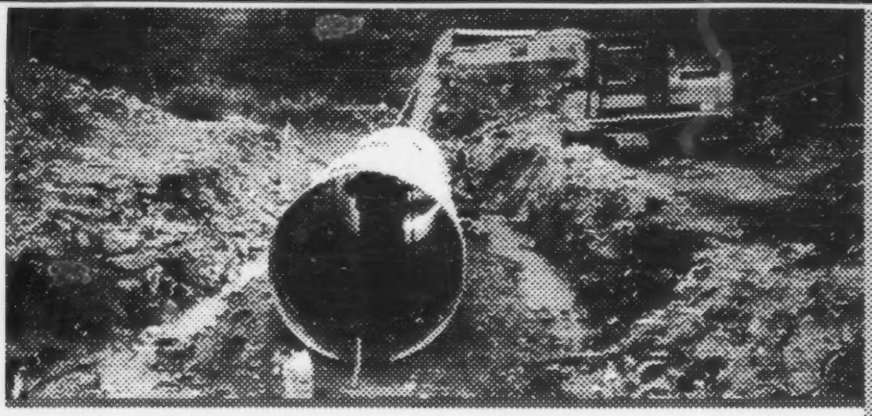
Lower Mainland Congestion Relief Program

Initiatives under the Lower Mainland Congestion Relief Program improve the effectiveness of the existing transportation infrastructure. The program invests in improvements to highway connections, supports alternative travel modes, and the use of traffic management technology to improve traffic flows. Recent initiatives in various states of development, construction or completed include the rehabilitation of the Lions Gate Bridge, high occupancy vehicles lanes on Highway 1 from Grandview to the Cape Horn Interchange, expansion of the Port Mann Bridge to include a west bound HOV to 152nd Street in Surrey, improvements to the Cape Horn Interchange, high occupancy vehicle lanes at Highways 17/99, investment in a traffic management pilot program, a new interchange at 200th Street in Langley, development of the South Fraser Perimeter Road partnership project for potentiat cost-sharing with federat and local governments, investment in the Airport Connector and the South Surrey Interchange project. By improving the effectiveness of the existing transportation infrastructure, the program extends the life-span of transportation resources, moves people and goods more efficiently, and improves connections to airports, border crossings, ferries and shipping terminals.

PERFORMANCE MEASURES

Effectiveness of the BCTFA's capital investments is measured by performance of roads in terms of mobility and safety, while the effectiveness of BCTFA program management is measured through scope and schedule performance, cost-benefit ratios of investments and cost performance.

The BCTFA is initiating a program of post-implementation reviews in accordance with the Capital Management Framework being developed by the Ministry of Finance and Corporate Relations. These reviews will augment standard capital project monitoring processes that deal with scope, schedule and budget and will be directed at ascertaining whether project or program objectives as outlined in the business case were achieved. These reviews will also assess operational performance, audit implementation procedures and processes, and provide a feed back loop for "lessons learned".



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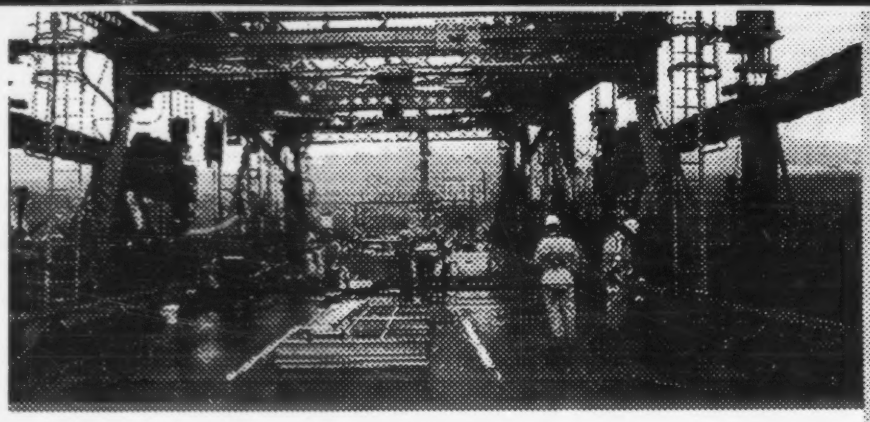


Mobility Index

Performance of the BCTFA's investment strategies is being measured separately for the Lower Mainland and other areas of the province. The direct effectiveness of investments on congestion in the Lower Mainland is a complex issue that is currently being reviewed. To measure accurately, goals are being adjusted to reflect that targets in the Lower Mainland differ from those for the rest of the province. (For example, congestion thresholds on provincial roads in the Lower Mainland would be lower than that for primary highway systems elsewhere where operating targets can realistically be set at a level of possibly 60% of available capacity at least 50% of the time. In the Lower Mainland, that figure would be 80%.) Improved data, for both the Lower Mainland and the rest of the province is currently being compiled and will establish better benchmarks on which to base performance reporting in the coming year.

Safety Measures

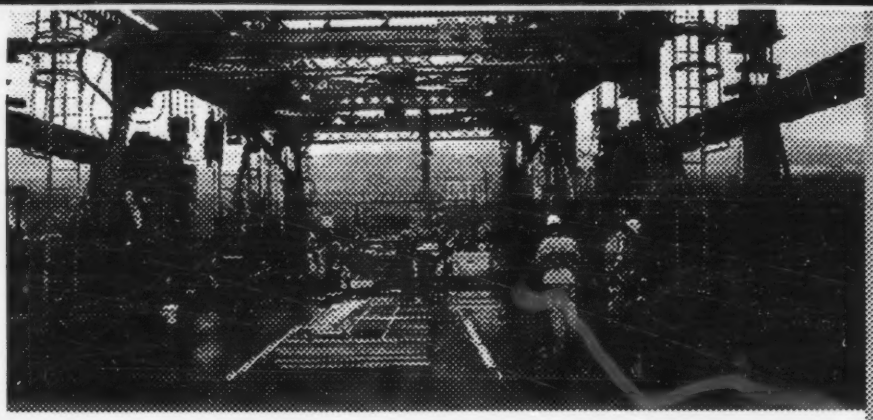
Road safety performance is a function of human, road, environmental and vehicle factors. Accident interventions by different levels of government and various agencies through engineering, education, enforcement/regulatory and medical strategies and means have improved road safety significantly over time. Although both the owner and the operator of provincial highways contribute much to road safety through infrastructure improvements, it is important to note that a high percentage of accidents are due to human action and condition factors that would not respond to engineering countermeasures. Therefore, it is not effective to establish road safety targets without consultation and coordination with other agencies which can also have influence over road safety problems by allocating mitigation resources.

To this end, a Memorandum of Understanding between ICBC, MoTH and BCTFA has been developed to see the parties approach road safety cooperatively over a five-year horizon.

Future safety goals depend on availability and quality of accident data. To this end, ICBC is in the process of improving reliability, consistency, timeliness and usefulness of accident data under its Crash, Crime and Contravention (CCC) project.

Lions Gate Bridge Rehabilitation

The Lions Gate Bridge Rehabilitation in Vancouver is a bridge rehabilitation project being managed directly by the BCTFA. It is an especially challenging task because the bridge is being replaced in 54 different sections while keeping the bridge open to over 80 per cent of daily traffic. While the engineering technology is not new, the combination of weather, traffic volumes, custom deck replacement equipment and the fact that the bridge is 63 years old, means daily challenges arise. In addition to deck replacement, the project also includes seismic upgrading of the bridge and the North Approach Viaduct, widened traffic lanes on the bridge and Stanley Park Causeway, widened sidewalks for pedestrians and cyclists along the entire crossing, and improved surface drainage, lighting and lane control. New ducting for fibre-optic cables will also be installed on a cost-recovery basis.



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BCTFA 2001/2002

Preservation and Replacement Program

1 Hwy 12: Lytton Bridge

Resurfacing Bridge Replacement, Seismic Retrofit and Safety Projects Throughout Province

Priority Corridor Program

- Vancouver Island Highway Project
- Highway 97, U.S. Border to Highway 1
- Highway 1 Cache Creek to the Rockies
- Nisga'a Highway
- Highway 37

Major Highway Performance Sustaining Program

2 Hwy. 97: John Hart Bridge – New Bridge
3 Hwy. 97C: Garcia Lake – Aspen Grove – Four Laning
4 Hwy. 16: Through Smithers – Four Laning/ Frontage Road
5 Hwy. 20/97: Oliver Intersection – I/S Improvements
6 Hwy. 3/95: Moyie Bluffs- Realignment
7 Tuck Inlet – Access Road
8 Hwy. 97: South Peace Hill – Realignment/Slide
9 Hwy. 99: Cullitan to Cheakamus – Four Laning
10 Hwy. 97: Bennett Creek to Link Creek – Reconstruction
11 Hwy. 12: Texas Creek Slide – Slide Remediation
12 Hwy. 97: Airport Curves – Realignment
13 Hwy. 101 Wharf Road/ Conveyor – Widening and I/S
14 Hwy. 3: Cranbrook: 3rd to 4th – Realignment

Minor Capital Improvement Program

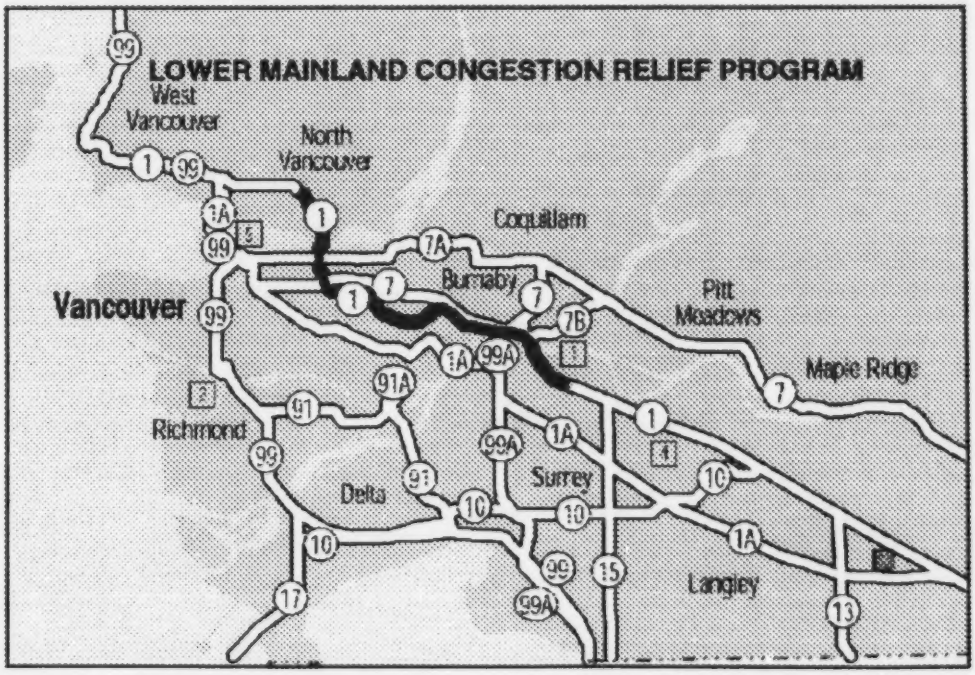
15 Hwy 97: 39th Avenue - Left Turn Slots
16 Hwy 6: Harris Road – Realignment
17 Hwy. 6: BNR R/R Crossing- Realignment
18 Hwy. 97: Agate Road – Left turn slots
19 Hwy. 3A: Glade Ferry Road – Realignment
20 Hwy. 3A: Rondell Road – Intersection upgrade
21 Hwy. 97: Flint Road – Intersection upgrade
22 Hwy 8: Aberdeen Road - Intersection upgrade
23 Hwy. 16: Watson Hill – Extend climbing lane
24 Hwy. 16: Hargreaves/ Kenney Lk. Road - W/B deceleration lane
25 Hwy. 16: Purden Lake Prov. Park – E/B left turn slot
26 Hwy. 97: Highway 26 Intersection – N/B Deceleration Lane
27 Hwy. 3: Erickson Road – I/S Realignment
28 Hwy 97: Dragon Lake Road – S/B Deceleration Lane
29 Hwy. 95A: Echo Field Road – Improve Road Grade
30 Hwy. 97: Crooked River Prov. Park – N/B left turn slot
31 Hwy. 97: 92A Street – E/B & W/B left turn slots
32 Hwy. 4: Kennedy Lake - E/B & W/B left turn lanes
33 Hwy. 19: Nanoose South CMB – Median Barrier
34 Hwy 5: McLure Ferry Road – N/B left turn slot
35 Hwy. 37: Carls Corner – Realignment
36 Hwy. 16: Francois Lake Road – Left-Turn Slots
37 Hwy. 97: Silvermails Road – Slip By Lane
38 Hwy. 6: South Slocan CPR Crossing – Realignment
39 Hwy. 16: Kalum Lake Road – Intersection Upgrade
40 Hwy 6: Highway 31A Junction – Intersection Upgrade
41 Hwy. 97: Chasm – Passing La
42 Hwy. 20: Bella Coola Hill – Re
43 Hwy. 35: Francois Lake Hill –
44 Hwy. 97: Road 271 – Intersec
45 Hwy. 3: Osoyoos Trestle – Sli
46 Hwy. 97: Australian Rest Area
47 Hwy. 1: Lytton South Access
48 Hwy. 97: Red Bluff Road – Le
49 Hwy. 3: Midway - Xerr – Resl
50 Hwy. 5: Rishtrap Rest Area – I
51 Hwy. 97: Jasper Road – Inter
52 Hwy. 93/95: Wills Road – Inte
53 Hwy. 3: Brannegle Road – Int
54 Hwy. 97: Ellison Overhead – S

Economic Development Program

- Kicking Horse Mountain Resort – Ski Hill Access Road
- Hwy. 1: Mt. Lehman I/C (Refer to Inset)
- Hwy 1: O'Connor Road I/C

Oil and Gas Initiatives (Northeast B.C.)

- Fort St. John Project
- Liard Project
- Border Project



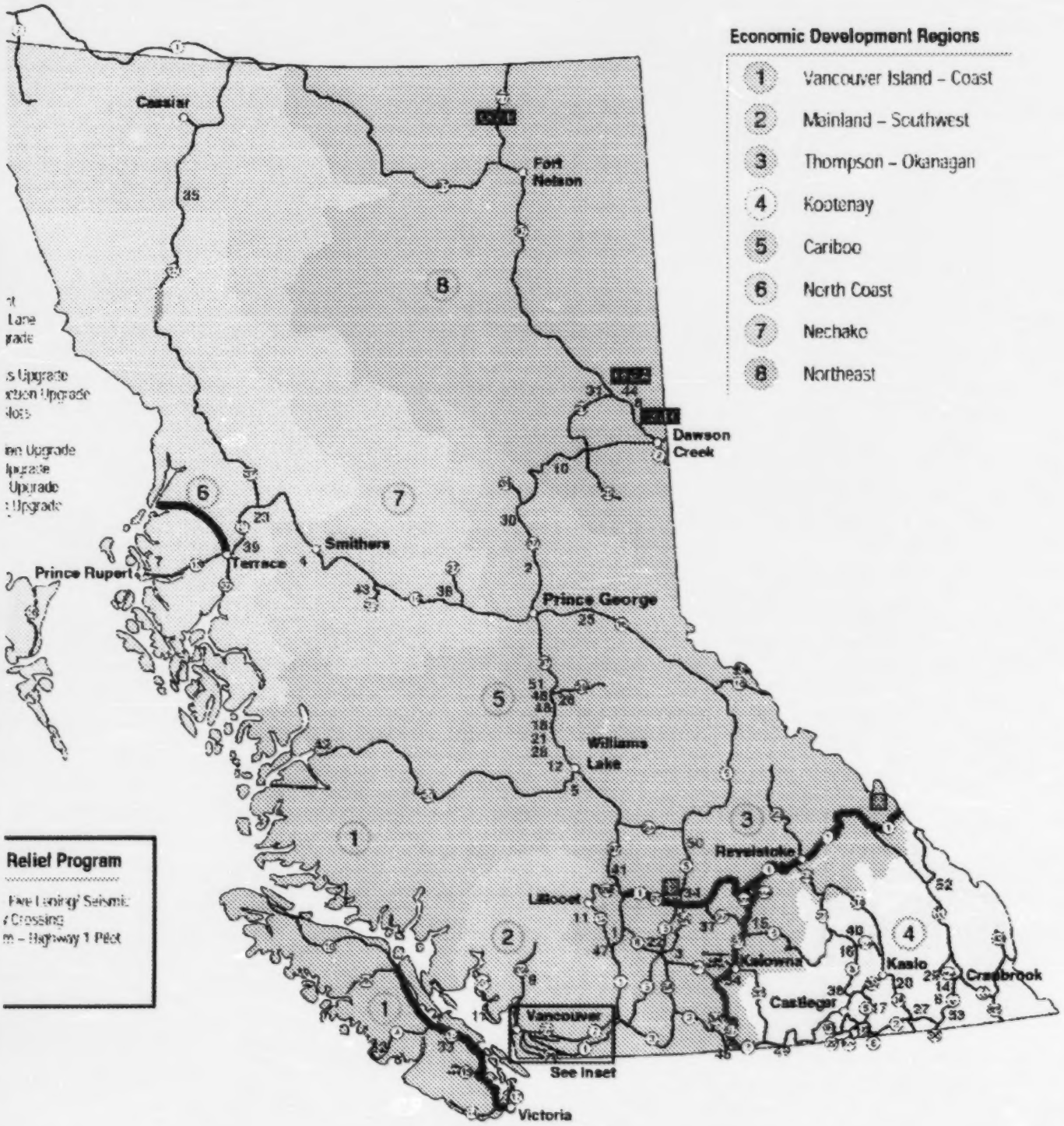
Project Development

Planning & Evaluation and Design & Engineering for initiatives throughout

Lower Mainland Cong

1. Port Mann Br / Cap
2. Sea Island Connect
3. Traffic Managemen
4. 80th Avenue/ 200th
5. Lions Gate Bridge

APITAL PROJECTS



1992-1-3 (2001/04/17)

Current safety performance measures and targets will be updated when revised safety targets are established by the parties based on more reliable and consistent data, reflecting planned resources and efforts of various agencies and general safety trends. The resulting system-level safety performance measures will be across-the-board indicators of combined safety results of relevant activities (engineering, education, enforcement/regulatory, and medical, etc.) implemented by various agencies. Program-specific safety performance measures can be developed with business partners when reliable data and proper monitoring processes are in place.

In the meantime, safety performance measures and targets have been established, but they are based on deteriorating accident data and are meant to be interim in nature reflecting minimum road safety expectation.

Table 4
Injuries per 100 million vehicle kilometres

Year	Target	Actual
1999/00	n/a	28.40
2000/01	28.0	TBD
2001/02	27.7	TBD
2002/03	27.4	TBD
2003/04	27.1	TBD

Injury Rate: Injuries/100 million vehicle kilometres travelled.

Table 5
Fatalities per 100 million vehicle kilometres

Year	Target	Actual
1999/00	n/a	1.08
2000/01	1.06	TBD
2001/02	1.05	TBD
2002/03	1.04	TBD
2003/04	1.03	TBD

Fatality Rate: Fatalities/100 million vehicle kilometres travelled.

Current safety performance measures and targets will be updated when revised safety targets are established by the parties based on more reliable and consistent data, reflecting planned resources and efforts of various agencies and general safety trends. The resulting system-level safety performance measures will be across-the-board indicators of combined safety results of relevant activities (engineering, education, enforcement/regulatory, and medical, etc.) implemented by various agencies. Program-specific safety performance measures can be developed with business partners when reliable data and proper monitoring processes are in place.

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Scope/Schedule Performance Index

This measure compares the budgeted cost of work actually done to the budgeted cost of work scheduled. The goal is to bring projects in on schedule, resulting in an index of 1.0.

Table 6
Scope/Schedule Performance

Year	Target	Actual
1999/00	1.000	0.979*
2000/01	1.000	0.966*
2001/02	1.000	
2002/03	1.000	
2003/04	1.000	

**BCTFA undertook an accelerated capital program in 99/00 and 00/01, with planned spending of $490 million and $485 million respectively. Some projects were not completed on schedule for a range of reasons including unanticipated geotechnical problems, more extensive public consultation, and delays to mitigate environmental impacts, resulting in more projects expected to be completed in 01/02 than budgeted.*

Benefit/Cost Ratio

This measure provides the benefit/cost ratio of capital projects initiated in a given year. Benefits include improved travel times and safety. These benefits are quantified using rates consistent with other jurisdictions in Canada. Benefit/cost ratio means that for every $1.00 invested, benefits of a comparative monetary value are generated over time.

The BCTFA has established a minimum target cost/benefit ratio of 2.0. Other factors such as coordination with rehabilitation activity, third-party participation and economic development opportunities influence investment decisions. The data in this year's performance plan is based on the cumulative value of a stratified representative sample of 22 business cases over the last three years, as the starting point for this measure.

Table 7
Benefit/Cost Ratio

Year	Target	Actual
1999/00 to 2001/02	2.0	3.29*
2002/03	2.0	
2003/04	2.0	

**Cumulative ratio for the fiscal years 99/00 to 01/02. Future performance will be provided on an annual basis.*

2

Cost Performance Index

Cost performance index is the actual cost of work performed compared to the budgeted cost of work performed. The goal is to bring projects in on budget resulting in an index of 1.0.

Table 8
Cost Performance

Year	Target	Actual
1999/00	1.0	0.919
2000/01	1.0	1.005
2001/02	1.0	
2002/03	1.0	
2003/04	1.0	

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Partnerships

BCTFA develops and delivers transportation projects that involve partnerships with other parties. The foundation of these partnerships is the capture or recovery of benefits that are generated by new transportation infrastructure and that accrue to specific identifiable beneficiaries. As such, the burden on provincial taxpayers is reduced. Partnerships are often put in place to support economic development opportunities or improve mobility in areas where urban growth affects highway performance.

The BCTFA develops partnerships with other levels of government, contractors, developers and others who are direct beneficiaries of infrastructure investments.

Partnerships possess one or more of the following attributes:

- cost sharing with other levels of government;
- recovery of the costs of infrastructure for specific development opportunities through a cost-sharing arrangement or a royalty arrangement based on use of the infrastructure; and
- capture of the increase in value of publicly owned lands.

These cost-recovery methods allow the BCTFA to deliver new infrastructure more cost-effectively, reducing costs to B.C. taxpayers.

Reducing costs to B.C. taxpayers also involves using less costly delivery mechanisms for highway infrastructure. Design/build partnerships are an example of a newer delivery method that helps achieve the best value for B.C.'s transportation dollars. With this delivery arrangement, both the design and construction of highway infrastructure are combined in a single contract, which transfers some of the risk to the contractor. Similar to this are design/build/develop partnerships that are based on the same principle, but also allow the value of public land to offset project cost.

In 2000/01 the value of BCTFA partnership projects reached about $95 million of which $40 million will be contributed by or recovered from other parties.

Economic Development and Infrastructure Partnerships

The BCTFA will invest in the following economic development and infrastructure partnership projects in 2001/02:

- *Vancouver Airport Connector*
- *Highway 1: 200th Street Interchange*
- *Greenville to Kincolith Road*
- *Stanley Park Causeway "S" Curve Reconstruction*
- *Highway 1: O'Connor Road Interchange*
- *Kicking Horse Mountain Resort Road*
- *Langford: Millstream Road*
- *Colwood: Millstream Road*
- *Tuck Inlet Road*
- *Bridge River Safety Improvements*
- *Port Alberni Airport Road*
- *Highway 1: Traffic Management Pilot Project*
- *Highway 1: Mt. Lehman Interchange (agreement pending)*

Construction that is part of a series of improvements to the Nisga'a highway in the Nass Valley

Economic Development Partnerships

Economic development partnerships facilitate specific economic development opportunities. Current policy requires that these projects be undertaken at no net cost to the BCTFA. Local governments or private companies proposing economic developments such as ski hills, usually take the lead in planning, developing and delivering these projects with support from the BCTFA.

Infrastructure Partnerships

Infrastructure partnerships are developed for projects that benefit both local and provincial road networks. These are cost-shared with local governments and can involve significant cost recoveries by capturing land values and using innovative arrangements for project delivery. The BCTFA takes the lead in planning and developing these projects.

Oil and Gas Initiative 2 in Northeast B.C.

The roads component of the Oil and Gas Initiative 2 is a six-year, $103 million program to improve public roads used by the oil and gas industry in northeast B.C. The program began in 1999/00 with a $3-million investment in aggregate production. The overall program plan comprises three project areas: a seven-road network north of Fort St. John, the Liard Highway and a two-road network near the B.C./Alberta border. About $21.5 million was invested through the program in 2000/01, and $19.5 million will be invested in 2001/02.

The development of this partnership program was led by the Ministry of Energy and Mines. The improvements must pay for themselves as the enhanced access to oil and gas resources provided will result in incremental resource royalties and other direct revenues to the Province. These revenues offset the costs of the road improvements in addition to generating a significant net revenue stream for government.

Federal-Provincial Partnership

In its 2000/01 budget, the federal government announced it would provide $600 million in funding nationally for provincial highways, with $150 million annually for four years starting in 2002/03, which would result in about $20 million annually for B.C. The parameters for B.C.'s portion of this program are currently being negotiated.

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Trans Canada Trail

The development of the B.C. portion of the Trans Canada Trail (TCT) is a B.C. Millennium project. The Province is committed to seeing a substantial portion of the 1,750 km corridor connected. The BCTFA views this as an opportunity to develop a specialized transportation corridor that will provide recreational access to B.C.'s scenic/cultural resources, enhance B.C.'s eco-tourism and become part of an alternative transportation system in urban areas. The investment also creates work opportunities for skilled labour and youth and helps to contribute to long-term economic development in local communities. About half of the trail can be accommodated on abandoned rail corridors and over 90% of the trail can be provided using existing public land. Roughly 100 km of new trail is required and this could increase as final trail routes are confirmed.

The BCTFA is contributing up to $5 million in total (approximately $3.238 million for capital and $1.762 million for operating costs) for key projects such as rehabilitating bridges and trestles, fencing/access point construction and operating a small project office, managed by the Land Use Coordination Office (LUCO). In 2001/02 $3.2 million will be invested for conducting field assessments, negotiating cost-sharing agreements and construction.

In addition, the BCTFA has reached an agreement with the Burlington Northern Sante Fe Railway Company on a purchase price of $1.5 million for its abandoned rail right-of-way from Salmo to Troup Junction in the Kootenays. This right-of-way will be used for a recreational trail and will link up with the Trans Canada Trail.

PERFORMANCE MEASURES

Transportation Investment from Partners

Effectiveness of BCTFA partnership initiatives are measured by the annual amount of transportation infrastructure investment recovered or to be recovered from other sources (land value capture, private sector, other governments). BCTFA has established a target of $60 million per year on average for such investment.

First Nations Access

Tuck Inlet Road

An $11-million partnership between BCTFA, the Lax Kw'Alaams First Nation and the federal government gives the Lax Kw'Alaams community an all-weather road so that it has access to the provincial highway system year-round. Access to this remote community in northwestern B.C. is currently possible only by air, water and 4x4 road when the weather is good. During construction, about 63 jobs will be created. A further 91 jobs will result from tourism and other economic development.

Greenville to Kincolith Road

A $34-million partnership between the federal and provincial governments and the Nisga'a Lisims government will build an all-weather road between Greenville and Kincolith. The road will provide vehicle access for Kincolith, which was previously an isolated community.

The road will support economic development in the Nass Valley. The Nisga'a First Nation is the first to enter a modern treaty with B.C. and the federal government. Building capacity for economic development and employment is part of the agreement negotiated in this treaty.

South-Surrey Interchange project was built through a unique design/build/ develop partnership

Achievement of this target is dependent on many factors, some outside the control of BCTFA. Funding from the federal government was anticipated to reach $40 million per year. While this has not materialized, contributions from other partners and from the capture of land values has exceeded original expectations. The BCTFA will continue to seek and seize opportunities for new partnerships.

Table 9
Annual Investment from Other Sources

Year	Target	Actual Amount
1999/00	$60 million	$26.9 million
2000/01	$60 million	$43.7 million
2001/02	$60 million	
2002/03	$60 million	
2003/04	$60 million	

Recovery of Financing

BCTFA performance on partnerships involving recoveries from beneficiary contributions is being measured by the amount of investment from other parties recovered each year compared to projected recoveries established when the partnerships were established or renegotiated in light of a fundamental change in circumstance.

These figures cover: Mt. Washington road, Quinsam Coal access road and coal handling facility, Furry Creek Interchange, Kicking Horse Mountain Resort road, Ladysmith pedestrian underpass, Millstream Connector through Colwood, Ballard bus demonstration project and Glintz Lake road. Financing arrangements are structured to recover 100 per cent of financing over the life of a project or some agreed to time period. Recoveries are taking place at slower pace than projected due in part to the downturn in resource economies that occurred in the mid 1990s. More recent projects are expected to be recovered within projections.

Table 10
Annual Recoveries from Other Sources

Year	Target	Actual Recoveries
1999/00	$2,144,653	$646,000
2000/01	$1,046,783	$737,810
2001/02	$1,678,083	
2002/03	$2,460,173	
2003/04	$2,090,101	

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Innovation

Limited financial and land resources, difficult terrain and a growing economy and population create many challenges for British Columbia. In addition to meeting the objectives of maintaining infrastructure, investing wisely and forming cost-sharing partnerships, the BCTFA is always looking for innovative ways to maximize value for investment, generating as many benefits as possible for dollars invested. Benefits include reducing demand for vehicular capacity on roads by creating viable alternatives to single occupant commuting, taking advantage of new technologies to better manage traffic in urban areas, and supporting local economies through provision of jobs and training opportunities. BCTFA has also embarked on an innovative approach to help finance infrastructure projects by generating revenues from the sale or lease of BCTFA-owned assets.

Demand Management

BCTFA's role in reducing demand for greater capacity involves investment in a high occupancy vehicle facilities, transit priority measures, cycling networks and a traffic management pilot program.

The BCTFA invests in HOV lanes, transit priority measures and cycling facilities in urban areas to help shift the number of people commuting by single occupant vehicle to other modes of travel. The graph below shows how B.C. travel-to-work modes compare to other Canadian jurisdictions.

Table 11
Provincial and National Comparison of Mode of Travel to Work

	B.C.	Alta.	Ont.	Canada
Vehicle Driver	74 %	76 %	72 %	73 %
Vehicle Passenger	7 %	7 %	8 %	7 %
Public Transit	9 %	8 %	12 %	10 %
Walk	7 %	5 %	6 %	7 %
Bicycle	2 %	1 %	1 %	1 %
Other	1 %	–	1 %	2 %

South Surrey Interchange Project

Design/build/develop partnerships are one of the BCTFA's cost-sharing/recovery strategies to get the best value for B.C.'s transportation dollars. Under the design/build/develop model, the private sector assembles a team to design and build a project. Included is a sale of surplus land resulting from the project.

The cost of the South Surrey Interchange project was $10.5 million with the BCTFA contributing $6.4 million and the City of Surrey $4.1 million. The BCTFA's share was partially covered by the sale of Crown land for a commercial centre development.

Improvements to the Cape Horn Interchange are taking place as part of the Port Mann HOV expansion project in the Lower Mainland

High Occupancy Vehicle Facilities

High occupancy vehicle (HOV) networks reduce congestion by encouraging more people to travel in fewer vehicles, especially when used with other traffic reduction strategies. HOV networks focus on moving people, rather than vehicles, and result in a reduction in growth of the number of cars on the road and smoother traffic flows and defer the need for larger capital investments to add additional capacity. These networks entail traffic lanes for exclusive use by HOVs, queue jumpers at bridges and tunnels to prevent HOVs from being caught in line-ups, and bus-activated signals to help bus drivers control how quickly they get through intersections. Ride-matching services, improved transit service and employer and incentive programs also encourage HOV use.

HOV projects on provincial facilities are funded through the BCTFA's Lower Mainland Congestion Relief Program. HOV projects on local facilities are cost-shared with local governments through the BCTFA's HOV/Transit Priority Program. A number of HOV lanes and transit priority initiatives have already been implemented in the Lower Mainland. HOV networks may also be helpful in the Greater Victoria and Okanagan regions. For 2001/02, the BCTFA has allocated $558,000 under the HOV/Transit Priority Program for projects on TransLink and municipal roads in Greater Vancouver and on Douglas Street in Greater Victoria.

The Province is also completing a west-bound extension of the Trans Canada Highway across the Port Mann Bridge to 152nd Street in Surrey in the Lower Mainland.

Cycling Networks

The BCTFA established the Cycling Network Program (CNP) in 1995 to encourage transportation cycling to work, school and shopping by accelerating the development of cycling infrastructure throughout the province and support the efficient movement of people and goods by providing transportation alternatives to the single occupant vehicle.

The CNP is an application-driven conditional grant program. CNP funding is available to local governments (on a 50-50 cost-sharing basis) for projects on local roads. To promote integrated and cost-effective cycling infrastructure development within communities, only those projects which form part of a Bicycle Network Plan that is approved by the local government are eligible for 100 per cent CNP funding. In 2001/02 BCTFA approved 34 projects in 26 communities with a total contribution of $2.32 million.

Traffic Management

A $25-million investment to alleviate traffic congestion on Hwy 1 between Lynn Valley Road in North Vancouver and 160th Street in Surrey, TMP uses intelligent traffic system technology – including video monitoring, internet traveller information systems and telecommunication networks – to save travel time, reduce accidents and lower air emissions. This four-year pilot program is expected to be operational by 2003. Revenues to partially offset costs are expected from the sale of data and access to the fibre optic facilities required for the project. Revenues of $300,000 per year are projected.

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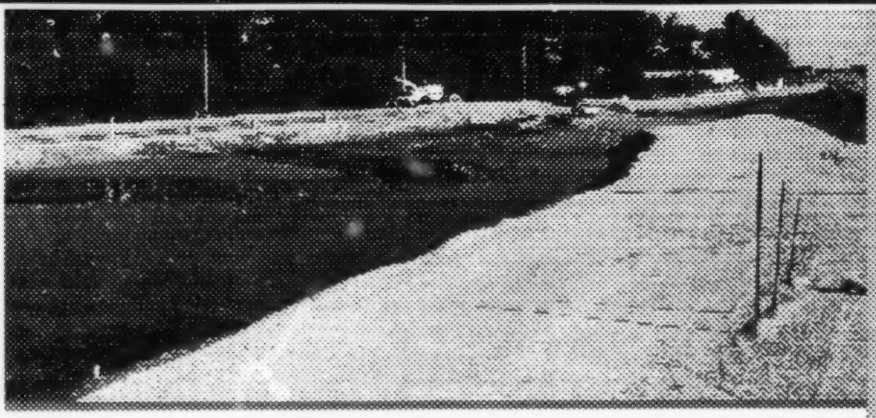
A $25-million investment to alleviate traffic congestion on Hwy 1 between Lynn Valley Road in North Vancouver and 160th Street in Surrey, TMP uses intelligent traffic system technology – including video monitoring, internet traveller information systems and telecommunication networks – to save travel time, reduce accidents and lower air emissions. This four-year pilot program is expected to be operational by 2003. Revenues to partially offset costs are expected from the sale of data and access to the fibre optic facilities required for the project. Revenues of $300,000 per year are projected.



Maximizing Benefits of Highway Capital Investment

The BCTFA's innovative role in maximizing economic and social benefits of capital highway investments involves not only direct job creation from capital investment, but also specific action to ensure local and equity hiring.

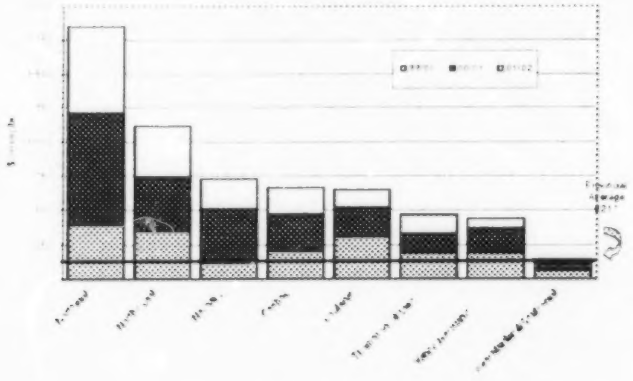
As shown by the figures below, significant numbers of direct jobs are created through the Capital Plan and will continue with future capital investment projections. Direct jobs are those derived directly from Capital Plan expenditures. The employment multiplier is based on the B.C. Input/Output Model.

Table 12 Job Creation

Year	Direct Jobs
1999/00	3,037
2000/01	2,981
2001/02	2,036
2002/03	2,096
2003/04	2,096

BCTFA highway capital investments are distributed regionally, ensuring that investment benefits are achieved throughout the province. The table below shows levels of employment-generating investment by region.

Figure 1
Cumulative Per Capita Investment by Economic Development Region



In addition to the number of direct jobs created through the BCTFA's highway investment, specific actions are taken to ensure that major highway

Port Mann/Cape Horn Interchange

In 1999, the BCTFA announced its investment in a two-year, $74-million project to add a fifth eastbound HOV lane to the Port Mann Bridge over the Fraser River between Surrey and Coquitlam. The project also involved improving the Cape Horn Interchange and improving the Mary Hill Bypass to assist in easing congestion on the Lower Mainland's worst traffic bottleneck. The main elements of the project involved expanding the bridge to five lanes, seismic upgrading, ramp improvements, and improvements to traffic merging and connections. This project will extend the benefits of HOV lanes into Surrey for eastbound traffic.

investment benefits remain in the communities where investments are being made. Through Highway Constructors Ltd. (HCL), a wholly owned subsidiary, the BCTFA promotes local hiring and equity training and hiring. Through project agreements, HCL is the employer for construction labour on all provincially funded major transportation projects with a provincial investment of more than $30 million, including the Skytrain extension project in the Lower Mainland. HCL employs well-qualified local workers, and where possible, these workers are from groups traditionally under-represented in the transportation construction industry, particularly, women, First Nations people, other visible minorities, people with physical disabilities and youth.

New Approach to Generating Revenues

Maximizing both the value of and return from public land holdings is another element of the BCTFA's plan to reduce the share of transportation infrastructure costs financed by British Columbia taxpayers. This is accomplished through the BCTFA's self-financing Land Management Branch established in 1999.

As the owner of provincial highway assets, managing land and land-based resources is part of the BCTFA's mandate. Highway and adjacent land assets worth $6.1 billion are owned by the BCTFA. Through both the *Build BC Act* and the *Budget Measures Implementation Act* the BCTFA is authorized to hold, maintain and dispose of property.

Net revenues earned by the Land Management Branch are used to finance transportation investments, helping to offset the need for additional dedicated tax revenues. The Branch manages BCTFA land holdings and administers land dispositions that are undertaken as part of the development of transportation infrastructure projects. Ensuring optimal returns from all real estate holdings by obtaining market value for lease and rental income on holding properties and selling surplus lands is a main objective. The Land Management Branch advises infrastructure project teams in land acquisitions and looks for opportunities for innovation and for maximizing revenue potential from surplus lands.

The Land Management Branch is developing its programs with an approach that anticipates revenue generating multiple use on rights-of-way. Uses include transportation corridors for commercial utilities, such as fibre optic cables, which open up opportunities for telecommuting.

PERFORMANCE MEASURES

The BCTFA's innovations will be measured against a range of criteria specifically related to the type of innovation including:

- HOV lane use and cycling network development to determine the effectiveness of efforts to reduce demand for capacity;
- Local employment and equity achievements to measure maximization of benefits of highway capital investment; and
- Land revenues to measure effectiveness at generating revenues.

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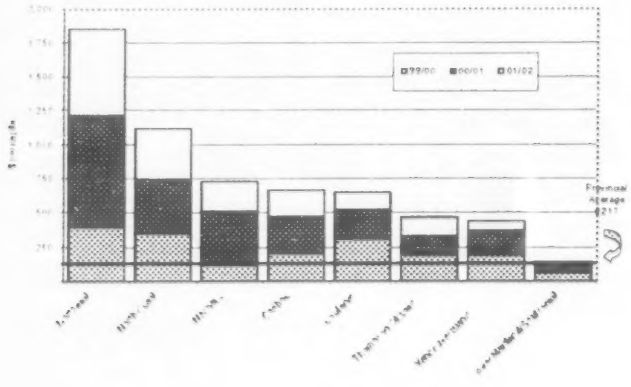

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Vehicle Occupancy Measure

Performance of investments made in HOV facilities is being measured by increased average vehicle occupancy (AVO) during peak periods and compliance with occupancy rules on the overall network. Current data covers Trans Canada HOV lanes and the Barnet-Hastings HOV lanes. Trans Canada HOV "before" and "after" data was collected primarily in September 1997 and September 1999 respectively and the Barnet-Hastings HOV "before" and "after" data was collected primarily in March 1996 and October 1997. Barnet-Hastings HOV is now part of TransLink Major Road Network.

It is anticipated that "after" data for the Highway 17/99 Bus Lane to 3+ HOV Lane Conversion Project will be collected in Spring 2001, and will be included in HOV Network Performance Measures in fiscal 2002/03. It is anticipated that "after" data for the Willingdon Bus Lane Project will be collected in 2001/02, and will be included in HOV Network Performance Measures in fiscal 2002/03 or 2003/04 depending upon availability.

Compliance for Trans Canada HOV lanes is above 85% while compliance for Barnet-Hastings HOV lanes is below 85%.

Table 13
Vehicle Occupancy and Compliance Measures

Project	Performance Measure	Before	After	% Change	Targets
All HOV Network Projects	Increased people movement in the a.m. peak period and direction.	AVO = 1.17	AVO = 1.22	3.73	By 2008, AVO = 1.28
All HOV Network Projects	Increased people movement (average vehicle occupancy) in the a.m. peak period and direction.	AVO = 1.23	AVO = 1.27	3.82	By 2008, AVO = 1.35
All HOV Network Projects	Compliance on overall network.	n/a	87%	n/a	85%

Benvoulin Road cycling lanes in Kelowna

Cycling Network Development

Over the past six years, 300 kilometres of cycling paths have been constructed by communities under the Cycling Network Program. The goal in future years is to continue that pace of construction. There are now 68 communities that have developed cycling networks and applied for funding.

Table 14
Cycling Network Kilometres Built

Year	Target	Actual Km Built
1999/00		35
2000/01		46
2001/02	36	
2002/03	40	
2003/04	40	

Employment Equity

Employment equity for HCL projects is measured by employees from equity groups as a percentage of the total HCL workforce. HCL has significantly increased the participation of those from under-represented groups in the transportation construction industry. The industry average is 6 per cent or lower.

Table 15
Percentage of Employees from Equity Groups

Year	Target	Average Equity Hires as a % of total HCL work force
1999/00	n/a	15.6%
2000/01	n/a	18.7%
2001/02	20	
2002/03	20	
2003/04	20	

Employment Training Measures

Training is measured by the number of trainees earning less than the full wage of a journeyperson on HCL projects. Reductions in future targets reflect the completion of HCL projects.

Table 16
Number of Trainees on HCL Work Sites

Year	Number of Trainees
1999/00	567
2000/01	536
2001/02	151
2002/03	35
2003/04	35

Renvoulin Road cycling lanes in Kelowna

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Local Hires

Local hire rates are based on the number of hires for construction labour within 100 kilometres of job sites. They apply to transportation construction projects with a value of $30 million or more for which Highway Constructors Ltd. is the employer. Data shows local hires percentages across the province.

Table 17
Local Hiring Rates

Year	Target	Actual percentage of local hires for HCL projects
1999/00	90%	91%
2000/01	90%	97%
2001/02	90%	
2002/03	90%	
2003/04	90%	

Land Revenues

Land revenues are measured by the total net revenues from sales, leasing and licensing of BCTFA-owned lands. The BCTFA Land Unit was established in 1998, and efforts initially focussed on property sales. Efforts have now shifted to a balance between sales, leasing and licensing in order to reduce dependence on the more volatile sales revenues. Stretch targets have been set for the Land Unit for the next three years.

Table 18
Land Revenues

Year	Land Revenue Targets ($000's)	Actual Land Revenues ($000's)
1999/00		$3,485
2000/01	$3,600	
2001/02	$5,986	
2002/03	$6,500	
2003/04	$6,500	

Employment Equity –

Highway Constructors Ltd. was cited as a model of labour and equity innovation in the independent report, The Road to Equity. *The report examines HCL's approach to training and hiring on the Vancouver Island Highway project.*

"...the HCL model used on the VIHP is an excellent model to use as a generic approach for training and integrating people from traditionally excluded groups into the workforce of large-scale construction projects...In addition to the very important goal of providing work for women and First Nations, the HCL's commitment to equity hiring provided considerable social benefits to both the local community and to the culture of the industry. Its success also shows that these results can be obtained within the budgetary constraints of the project."

– Kate Braid and Marjorie Griffin Cohen
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July, 2000
www.policyalternatives.ca

The Financial Picture

The Province has, with the support of the Auditor General, implemented a policy of capitalizing highway assets and amortizing them over their useful life. The effect is to spread the cost of an asset - i.e. to amortize it - over the term it is used: 40 years for new highways and 15 years for improvements to and rehabilitation on existing highways. Drivers pay for these assets as they use them, through motor fuel tax (3.25 cents per litre) and car rental taxes ($1.50 per car rental day) that are dedicated by legislation as revenue to the BCTFA. In addition, the BCTFA generates revenue from its land assets and from user fees and partnerships.

Since BCTFA's revenues are only sufficient to cover annual amortization, financing and operating costs, the difference is borrowed. In 2001/02, drivers and direct beneficiaries will pay $203.5 million towards debt servicing and amortization costs of assets built in prior years and the Province will contribute a grant of $34.0 million. BCTFA will borrow $290.4 million to pay for new capital investments of $331.0 million in 2001/02. This, in turn, will increase revenue requirements in future years by about $40.0 million per year to cover incremental debt servicing and amortization costs.

BCTFA Highway Capital Plan

The provincial government has established a capital limit of $301 million for BCTFA investment in highway projects in 2001/02.

Table 19
2001/02-2003/04 BCTFA Capital Budget by Program (in $000's)

Program	2001/02	2002/03	2003/04
Preservation & Replacement [1]	$ 140,200	$ 135,000	$ 135,000
Priority Corridors	73,195	64,547	65,163
Major Hwy Performance Sustaining	19,088	27,189	28,792
Lower Mainland Congestion Relief	19,866	6,457	32
Minor Capital Improvements	11,395	10,000	10,000
Economic Development	371		
OGI2 Northern Road Program	19,568	18,578	20,778
Other [2]	17,317	(3,133)	(3,000)
Unallocated Expenditure Space [3]		42,362	44,235
Total Capital Budget	$ 301,000	$ 301,000	$ 301,000

Notes:

Expenditure allocations do not include funds carried over from the previous fiscal year in accordance with Treasury Board's carry-over policy.

1. Rehabilitation allocation does not include non-capitalizable rehabilitation (e.g. rock scaling, avalanche control, etc.) funded through the Ministry of Transportation and Highways (MoTH) Voted Appropriation ($30M).

2. Includes BCTFA investments in the Trans Canada Trail initiative and project development activity required to support program development, interest during construction, and land recoveries.

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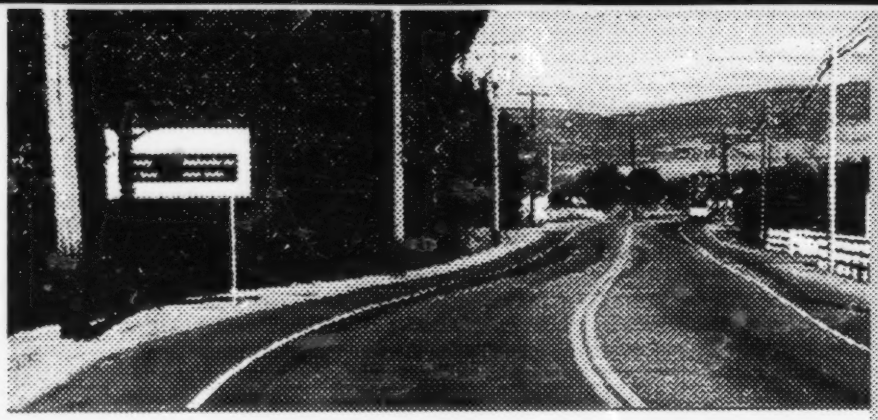

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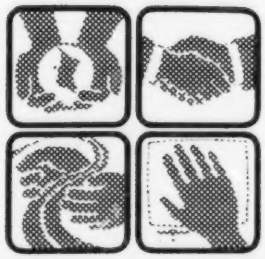

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3. To be allocated by the BCTFA Board to specific projects and programs based on the conclusions from project development initiatives and on-going investment planning.

BCTFA Operating Budget

The BCTFA Operating Budget for the next three years is set out in the table below.

Table 20
Operating Budget (in $000's)

	2001/02	2002/03	2003/04
REVENUES			
Province-wide dedicated taxes	$ 203,500	$ 208,500	$ 214,000
Provincial grant	34,000	34,000	34,000
New incremental revenues [1]	—	40,000	57,000
Net land revenues	5,986	6,500	6,500
Economic development revenues	1,500	3,500	3,500
	244,986	292,500	315,000
EXPENSES			
Net financing costs	135,557	171,162	183,603
Amortization	76,113	91,911	102,578
Contribution to MoTH	15,400	14,900	14,900
Grant programs	10,702	5,770	5,370
Operations and administration	4,790	4,790	4,790
Strategic planning fund	1,500	2,000	2,000
Land Unit	616	616	616
HCL management fee	204	204	204
	244,882	291,353	314,061
NET INCOME	$ 104	$ 1,147	$ 939

Notes:

1. Source of new incremental revenues is yet to be determined.

Conclusion

Throughout its annual operations, the BCTFA conducts its business on the basis of best practices to identify, finance and schedule transportation infrastructure. To fulfill that mandate, the BCTFA ensures that all capital investments are made with a view to protecting assets, wise planning, creating cost-savings through partnerships and providing value for money through innovation. By implementing these objectives, the BCTFA will continue to strive for cost-effectiveness and accountability, as required by the *Budget Transparency and Accountability Act*.

A summary of BCTFA performance indicators for specific activity groups is contained in Table 21.

Table 21
Summary of BCTFA Goals, Strategies and Performance Measures

GOAL	STRATEGY	MEASURES
Protection of Transportation Assets	- **Preservation and Replacement Program** - **Air Transport Assistance Program** - **Newly Incorporated Territories Program**	- **Bridge and Pavement Condition Indexes:** Measure the percentage of B.C.'s bridges and pavement quality rated as good or excellent condition on an annual basis. - **Seismic Investment Rate:** Measures costs avoided through annual seismic upgrade investments.
Planning and Investing Wisely	- **Priority Corridors Program** - **Major Highway Performance Sustaining Program** - **Minor Capital Improvement Program** - **Lower Mainland Congestion Relief Program**	- **Mobility Index:** Measures being developed. - **Safety Measures:** Measures injuries per 100 million vehicle kilometres and fatalities per 100 million vehicle kilometres. Additional measures are being refined. - **Scope/Schedule Performance Index:** Compares budgeted cost of work actually done to the budgeted cost of work scheduled. - **Cost Performance Index:** Compares the actual cost of work performed to the budgeted cost of work performed. - **Benefit/Cost Ratio:** Measures benefits for each dollar spent on capital projects.
Partnerships	- **Economic Development Partnerships** - **Infrastructure Partnerships** - **Oil and Gas Initiative 2** - **Federal-Provincial Partnerships** - **Trans Canada Trail**	- **Transportation Investment Leveraged:** Measures annual transportation infrastructure investment recovered or to be recovered from other sources. - **Actual versus Projected Recoveries:** Measures recovery of investment from other parties each year compared to projected recoveries.
Innovation	- **Demand Management** - **HOV/Transit Priority Program** - **Cycling Network Program** - **Maximizing the Benefits of Highway Investment** - **Generating Revenues**	- **Vehicle Occupancy Measures:** Measures increased average vehicle occupancy during peak periods and compliance with occupancy rules on the overall network. - **Cycling Network Development:** Measures pace of cycling facility construction. - **Employment Equity:** Measures percentage of total HCL employees from equity groups. - **Employment Training:** Measures the number of HCL trainees. - **Local Hires:** Measures number of HCL employees hired within 100 km of job sites on provincial capital transportation investments of $30 million or more. - **Land Revenues:** Measures total net revenues from sales, leasing and licensing of public lands.

Regular reporting of actual results will be included in each year's annual report.